## ABSTRACT OF THE DISCLOSURE

An intelligent flash system for a digital camera having components including an image optical pickup, an interface circuit, a flash unit and a processor. Upon activation of the camera, ambient lighting conditions are evaluated and if flash energy is required, a first low energy pre-flash is radiated, the reflected light received by the optical pickup having a multiplicity of pixels, and the output of the pixels converted to image intensity data by the interface circuit. The processor samples the image intensity data, weighing the center image area more heavily, and creates a histogram plot of quantity of pixels v.s. intensity, and separates the plot into a bar graph from which a determination of exposure is obtained. The histogram is then used to calculate a multiplicative scaling factor used to multiply the first flash energy to an estimate of a flash energy for correct exposure. Conditions of extreme over and under exposure result in the activation of a second flash at an adjusted energy level. The image data of the second flash is then analyzed and the exposure compared with the result of the first flash. A final determination of flash energy is then made based upon the results.

DHJ:RLF:0208z